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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,913	02/27/2002	James J. Jakubowski	43231C	3329

109 7590 03/07/2005

THE DOW CHEMICAL COMPANY  
INTELLECTUAL PROPERTY SECTION  
P. O. BOX 1967  
MIDLAND, MI 48641-1967

EXAMINER

NILAND, PATRICK DENNIS

ART UNIT PAPER NUMBER

1714

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/085,913

Applicant(s)

JAKUBOWSKI ET AL.

Examiner

Patrick D. Niland

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 January 2005 and 03 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7,9,13,15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7,9,13,15 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08).<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1714

1. The amendment of 1/7/05 has been entered. Claims 7, 9, 13, and 15-16 are pending.
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/3/05 has been entered.
3. Claims 15-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is not basis, in the originally filed specification, for the newly recited "non-self emulsifying prepolymer" regarding the polyurethane of the instant claims 15-16. This negative limitation, which effectively excludes self emulsifying prepolymers, is not supported per Ex parte Graselli, 231 USPQ 393-395. It is noted further that the described invention encompasses the use of polyether based polyurethane prepolymers which would in fact be self emulsiable further showing that the instant invention did not intend to exclude self emulsiable polyurethanes.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1714

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7, 9, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. No. 4092286 Noll et al..

Noll discloses the instantly claimed composition at the abstract; column 2, lines 46-68; column 4, lines 52-58; column 7, lines 65-68; column 8, lines 41-68; column 9, lines 1-15, of which the amine/water mixture of the paragraph bridging columns 8-9 will necessarily give some reaction of water with the NCO prepolymer, which falls within the scope of the instantly claimed chain extension with water, column 11, lines 8-46; and column 13, lines 25-27 and 49-50 for the instantly claimed solids content. The choice of anionic emulsifiers from the ionic emulsifiers of column 11, lines 43-45 is not so great as to remove Noll as an anticipating reference as they are the most commonly used emulsifiers from a group of anionic, cationic, and rarely used zwitterionic emulsifiers. See *In re Arkley*, 455 F 2d 586, 172 USPQ 524 (CCPA 1972) and *In re Petering*, 301 F 2d 676, 133 USPQ 275 (CCPA 1962). The lower weight fraction (note the definition of average molecular weight in polymer chemistry) of the polyurethane of the patentee falls within the scope of the instantly claimed "alkali metal soap of a modified resin".

Art Unit: 1714

The instant claims do not recite any limitations regarding the claimed polyurethane so as to exclude it from having any moieties therein including moieties which will make it self emulsifying. "Consisting" with regard to external anionic surfactants does not change the fact that the instantly claimed language does not recite any limitations regarding the claimed polyurethane so as to exclude it from having any moieties therein including moieties which will make it self emulsifying, particularly as the preamble of the claim recites "comprising" and the patentee encompasses the use of only anionic surfactants as the external surfactant.

The hydrophilic stabilizing groups within the polyurethanes of Noll are not excluded by the instant claims which do not recite much about the polyurethane per se. Noll clearly discloses the use of the instantly claimed anionic emulsifiers, as stated above. The language of Noll relating to the necessity of these emulsifiers does nothing to contradict the positive disclosure that they may be used in the composition of Noll, which is sufficient to anticipate the instant claim language. Reference to the particle size at low levels of internal hydrophilic groups is not material in view of the fact that this argument of the applicant ignores the fact that Noll encompasses larger amounts of these ionic groups with external surfactant, which will be understood to the ordinary skilled artisan as giving lower particle sizes, e.g. that of example 1 is 0.2 micrometers, well within the instant claims. See the other examples and the above cited section of column 11. This argument fails since it is not commensurate in scope with the overall teachings of Noll. Applicant's argument that the instant claim language excludes "internal surfactant" is not persuasive as no such language appears in the claims in any manner and the claims encompass all polyurethane molecules which can give the other required features. While the lists of components that one may choose from, i.e. the claimed Markusch groups contain the

Art Unit: 1714

closed language of “consisting” as required of such lists, the overall composition contains no such closed language and any additional components may be in the claimed compositions due to the overall open nature of the claims, i.e. the first occurrence of “comprising”. This rejection is therefore maintained.

7. Claims 7, 9, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 4092286 Noll et al. in view of US Pat. No. 4507426 Blake (applicant’s assumptions regarding Blake as referencing the Blake patent of the Notice of References Cited is correct).

Noll discloses the instantly claimed composition at the abstract; column 2, lines 46-68; column 4, lines 52-58; column 7, lines 65-68; column 8, lines 41-68; column 9, lines 1-15, of which the amine/water mixture of the paragraph bridging columns 8-9 will necessarily give some reaction of water with the NCO prepolymer, which falls within the scope of the instantly claimed chain extension with water, column 11, lines 8-46; and column 13, lines 25-27 and 49-50 for the instantly claimed solids content. The choice of anionic emulsifiers from the ionic emulsifiers of column 11, lines 43-45 is not so great as to remove Noll as an anticipating reference as they are the most commonly used emulsifiers from a group of anionic, cationic, and rarely used zwitterionic emulsifiers. See *In re Arkley*, 455 F 2d 586, 172 USPQ 524 (CCPA 1972) and *In re Petering*, 301 F 2d 676, 133 USPQ 275 (CCPA 1962). The lower weight fraction (note the definition of average molecular weight in polymer chemistry) of the polyurethane of the patentee falls within the scope of the instantly claimed “alkali metal soap of a modified resin”.

The instant claims do not recite any limitations regarding the claimed polyurethane so as to exclude it from having any moieties therein including moieties which will make it self emulsifying. “Consisting” with regard to external anionic surfactants does not change the fact

Art Unit: 1714

that the instantly claimed language does not recite any limitations regarding the claimed polyurethane so as to exclude it from having any moieties therein including moieties which will make it self emulsifying, particularly as the preamble of the claim recites “comprising” and the patentee encompasses the use of only anionic surfactants as the external surfactant.

The hydrophilic stabilizing groups within the polyurethanes of Noll are not excluded by the instant claims which do not recite much about the polyurethane per se. Noll clearly discloses the use of the instantly claimed anionic emulsifiers, as stated above. The language of Noll relating to the necessity of these emulsifiers does nothing to contradict the positive disclosure that they may be used in the composition of Noll, which is sufficient to anticipate the instant claim language. Reference to the particle size at low levels of internal hydrophilic groups is not material in view of the fact that this argument of the applicant ignores the fact that Noll encompasses larger amounts of these ionic groups with external surfactant, which will be understood to the ordinary skilled artisan as giving lower particle sizes, e.g. that of example 1 is 0.2 micrometers, well within the instant claims. See the other examples and the above cited section of column 11. This argument fails since it is not commensurate in scope with the overall teachings of Noll. Applicant’s argument that the instant claim language excludes “internal surfactant” is not persuasive as no such language appears in the claims in any manner and the claims encompass all polyurethane molecules which can give the other required features. While the lists of components that one may choose from, i.e. the claimed Markusch groups contain the closed language of “consisting” as required of such lists, the overall composition contains no such closed language and any additional components may be in the claimed compositions due to

Art Unit: 1714

the overall open nature of the claims, i.e. the first occurrence of “comprising”. This rejection is therefore maintained.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the dispersion forming ingredients and amounts of Noll which fall within the scope of the instant claims and which have the instantly claimed parameters because they are encompassed by Noll and would have been expected to give the dispersion properties described by Noll. It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the instantly claimed emulsifiers because they are shown by Blake to be useful in polyurethane emulsions (abstract and column 7, lines 21-31) and these fall within the scope of ionic emulsifiers of Noll.

This rejection is therefore maintained.

8. Claims 7, 13, and 15-16 are rejected under 35 U.S.C. 102(e) as being anticipated by US Pat. No. 5900457 Duan et al..

Duan discloses the instantly claimed compositions at column 2, lines 28-62; column 3, lines 13-67, particularly 56-67; column 4, lines 1-67, particularly lines 1, which shows self emulsifying moieties to not be required, 19-20, and 43-49; column 5, lines 1-67, particularly 1, 6, 22-26, and 52-67, of which “about 45% by weight” falls within the scope of the instantly claimed solids content; and the remainder of the document.

9. Claims 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. No. 5900457 Duan et al..

The new matter portion of the instant claims 15-16 is not entitled to the priority date of the instant application. Therefore, this rejection is proper under 102(b).



Art Unit: 1714

Duan discloses the instantly claimed compositions at column 2, lines 28-62; column 3, lines 13-67, particularly 56-67; column 4, lines 1-67, particularly lines 1, which shows self emulsifying moieties to not be required, 19-20, and 43-49; column 5, lines 1-67, particularly 1, 6, 22-26, and 52-67, of which “about 45% by weight” falls within the scope of the instantly claimed solids content; and the remainder of the document.

10. Claims 7, 13, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 5900457 Duan et al..

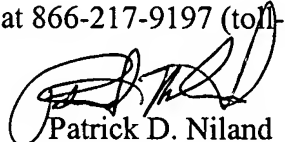
Duan discloses the instantly claimed compositions at column 2, lines 28-62; column 3, lines 13-67, particularly 56-67; column 4, lines 1-67, particularly lines 1, which shows self emulsifying moieties to not be required, 19-20, and 43-49; column 5, lines 1-67, particularly 1, 6, 22-26, and 52-67, of which “about 45% by weight” falls within the scope of the instantly claimed solids content; and the remainder of the document. It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the instantly claimed combinations of ingredients and other composition parameters in the composition of the patentee because they are encompassed by the patentee, as stated above, and would have been expected to give the dispersion properties of the patentee.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Thursday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1714

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patrick D. Niland  
Primary Examiner  
Art Unit 1714